

Grayscale Lithography Methods and Devices

**Abstract of the Disclosure**

In one aspect, the invention relates to a method of fabricating a three-dimensional structure from an etchable substrate. The method includes steps of specifying a unit cell size for a plurality of unit cells. Each unit cell corresponds to an area on a mask. Generating a plurality of measurement values is another step of the method. Each measurement value corresponds to a portion of the structure. Further, each measurement value is associated with a specific unit cell. The steps of the method also include converting the plurality of measurement values to a plurality of unit cell fill factor values and generating a gray tone data set in response to the unit cell fill factor values. The gray tone data set includes a plurality of distinct rectangular areas and distinct square areas, each distinct area corresponding to a unique gray tone level.

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